

## Release Notes

# hp StorageWorks SR2122-2 IP Storage Router

**Product Version:** 3.4.5b

Fourth Edition (March 2005)

**Part Number:** AA-RV20C-TE

These release notes are for the HP StorageWorks SR2122-2 IP Storage Router running firmware version 3.4.5b and provides important information not covered in other documentation.

For the latest version of these Release Notes and other IP storage router documentation, access the HP storage web site at: <http://www.hp.com/country/us/eng/prodserv/storage.html>.



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Printed in U.S.A

SR2122-2 IP Storage Router Release Notes  
Fourth Edition (March 2005)  
Part Number: AA-RV20C-TE

## About this document

This section describes the content reflected in this document, including:

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## Release notes information

These Release Notes cover the following major topics:

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- [Identifying the SR2122-2 Version Level](#), page 5
- [Identifying the HP-UX iSCSI Software Initiator version](#), page 6
- [Identifying the HP Windows iSCSI driver version level](#), page 6
- [Identifying the Linux Red Hat iSCSI driver version level](#), page 7
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## Intended audience

This document is intended for customers who purchased the SR2122-2 IP Storage Router.

## Other SR2122-2 IP Storage Router documentation

The SR2122-2 IP Storage Router kit also includes:

- HP StorageWorks SR2122-2 IP Storage Router User Guide
- HP StorageWorks SR2122-2 IP Storage Router Command Line Interface Reference Guide
- HP StorageWorks SR2122-2 IP Storage Router Rack Mount Template
- HP StorageWorks SR2122-2 IP Storage Router Getting Started Guide (web only)
- HP StorageWorks SR2122-2 IP Storage Router Product Support Tables (web only)

Additional documentation, including white papers and best practices documents, are available via the HP web site at: <http://www.hp.com>.

## Overview

These release notes are for the HP Storageworks SR2122-2 IP Storage Router running firmware version 3.4.5b. This document provides important information that is not covered in other documentation.

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**Important:** Read this entire document before installing and configuring the HP Storageworks SR2122-2 IP Storage Router.

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## Identifying the SR2122-2 Version Level

You can determine the SR2122-2 software version level by typing the following command at the SR2122-2 CLI prompt:

```
[SR2122-2]# sho version
```

The resulting display lists the software version level:

```
Hewlett-Packard SR2122 Storage Router
```

```
      CLI Version: 2.1
      iSCSI Version: 0/2 (Min/Max)
System Bootstrap: 3.4.5b-K9
Operating System: 3.4.5b-K9
      Application: 3.4.5b-K9
      Web Server: R6_1_0
      OpenSSH: 3.4p1
      OpenSSL: 0.9.6e
      Zlib: 1.1.4
```

```
Copyright (c) 1994-2003 Hewlett-Packard Company
```

```
[SR2122-2]#
```

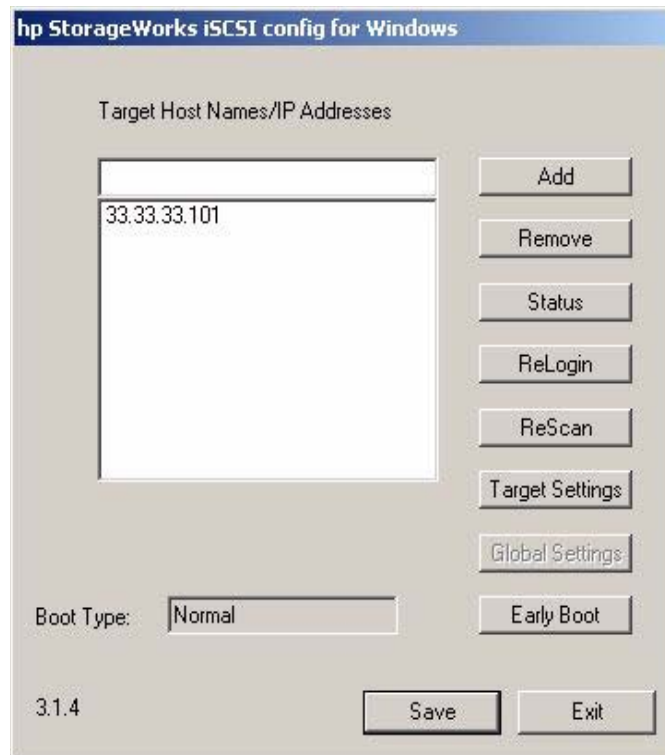
## Identifying the HP-UX iSCSI Software Initiator version

To identify the HP-UX iSCSI Software Initiator driver version, enter the following command while logged in as root or superuser.

```
root-> /usr/sbin/swlist iSCSI-00
```

## Identifying the HP Windows iSCSI driver version level

Open the “hp iSCSI Config” application found in the Windows Control Panel.



**Figure 1: iSCSI Driver Version**

The Windows iSCSI driver version (3.1.4) will appear in the lower left-hand corner.

## Identifying the Linux Red Hat iSCSI driver version level

To verify the iSCSI driver on a Linux Red Hat host, type the following command:

```
cat /proc/scsi/iscsi/0 | grep "iSCSI driver Version"
```

The resulting display lists the software version level:

```
iscsi driver version: 3.4.1 (20-Oct-2002)
```

## SR2122-2 software and iSCSI driver updates

To view the latest version of SR2122-2 software or Windows iSCSI drivers please see the SR2122-2 web site:

<http://www.hp.com/support/iprouter>

For the HP-UX iSCSI Software Initiator, supporting patches and other driver related information are maintained in Release Notes. To access the Release Notes:

1. Go to the URL: [www.docs.hp.com](http://www.docs.hp.com)
2. Click on "Networking and Communications"
3. Click on "iSCSI (SCSI over TCP/IP)"
4. Click on the Release Note link for the appropriate version of HP-UX

To download the HP-UX iSCSI Software Initiator:

1. Go to the URL: [www.software.hp.com](http://www.software.hp.com)
2. Click on HP-UX 11i operating environment
3. Click on "iSCSI Software Initiator"

To view the latest Linux drivers for the HP SR2122-2 iSCSI router please refer to the following web site:

<http://sourceforge.net/projects/linux-iscsi>

For Microsoft's iSCSI initiator driver, refer to the Microsoft website.

## Hardware and software support

Refer to the *SR2122-2 IP Storage Router Product Support Tables* for the latest hardware and software support information. The Tables are available at:

<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>

### Network interface controller (NIC) hardware support

The following Network Interface Controllers are supported:

- **HP-UX** - All NICs supported by HP-UX
- **Microsoft Windows** - All GbE NICS supported by HP for Windows
- **Red Hat Linux** - All GbE NICS supported by HP for Red Hat Linux

### Operating system software support

The following operating system software versions are supported with the SR2122-2 with iSCSI:

- HP-UX 11i v1, HP-UX 11i v2
- Microsoft Windows 2000 SP2 with either Microsoft hotfix Q302895 or Q248720 and Microsoft hotfix Q318271, SP3
- Red Hat Advanced Server 2.1
- Windows 2003

Refer to the *HP StorageWorks SR2122-2 IP Storage Router Product Support Tables* for supported operating system software versions with the SR2122-2 and FCIP. This document is available at:

<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>

### Compaq Network Teaming software support

Compaq Network Teaming is supported on the Windows operating system.

### SR2122-2 management software support

The following HP management software is supported:

- Compaq Insite Manager 7
- HP Openview Storage Manager

The SR2122-2 management software is supported on Windows and Linux operating systems only.



## SR2122-2 configuration rules

### SR2122-2 router rules

**Table 1: SR2122-2 Router Rules**

Router Rule	Maximum
Maximum scsirouter instances per SR2122-2 Router (and per SR2122-2 Router Cluster)	12
Maximum iSCSI host connections per SR2122-2 SCSI Router instance	32
Maximum active logical units (LUNs) per SR2122-2 Router	120
Maximum active targets per SR2122-2 Router	120

- The SR2122's 2<sup>nd</sup> fibre Channel port (FC2) is not supported as a redundant SAN port for FC1.
- Direct connect of the SR2122-2 Fibre Channel ports to any HP storage array is not supported.
- The MSR2122 Management port must be in a different subnet than the SCSI Router Instances.

### iSCSI host rules

**Table 2: iSCSI Host Rules**

iSCSI Host Rule	Operating System	Maximum
Maximum targets accessed per iSCSI host	Windows 2000, Windows 2003, HP-UX, Linux	120
Maximum active LUNs per target	Windows 2000, Windows 2003, Linux, HP-UX	120

### Operation system rules

- Linux Clustering is not supported.
- HP Secure Path for Linux with the MSA1000, RA/MA8000, EMA/ESA12000 and Enterprise Virtual Arrays is not supported.
- HP Auto Path for VA/XP for HP-UX, Windows 2000, Windows 2003 and Linux are not supported.
- HP Secure Manager on XP and VA is not supported.
- The MSA1000 is not supported with Secure Path for Windows

## Storage array rules

- Without HP Secure Path the Enterprise Virtual Array is supported with the SR2122-2 accessing only one EVA controller port. This will disable controller failover protection.
- The SR2122-2 fibre channel ports appear as host bus adapters to the Fibre Channel switches and to all storage arrays.

## Fibre Channel switch/fabric rules

- The SR2122-2 should only be zoned with the storage devices that it will access. Zoning the SR2122-2 with other servers is not supported.
- Disable `useBport` when connecting the SR2122-2 to C-series switches using MDS switch firmware v2.01b or later.
- Disable `useBport` when connecting the SR2122-2 to B-series switches running switch firmware 3.2.x or 4.4.x or later. Enable `useBport` for switches running other firmware versions.

## Management software rules

- OVSAM support is limited to property support only. It will identify the device, and by clicking on it, one can launch the device embedded web server interface or telnet. A device specific plug-in for the SR2122-2 is available on the OVSAM Website.
- CIM 7 Supports the SR2122's SNMP management capabilities.
- Management of the storage arrays through the SR2122-2 is not supported. Please use the recommended application/element manager to configure the storage array.

## Updates/Fixes for this release of firmware

Fixes include:

- Memory (mbuf) leak during handling of Async event (RX\_LR) during handling of FCIP link failure.  
A memory leak and potential router crash would occur because of a mishandling of a link failure during an unstable FCIP connection. This problem would never appear during normal FCIP operations and is fixed in this release.
- An SR2122-2 would “panic” when a standard MIB II polling engine, such as the HP OpenView Network Node Manager, attempted to SNMP poll the SR2122-2.

## Known problems

### C-series MDS v2.01b switch firmware requirements

- For iSCSI with C-Series switches, the Fibre Channel port on the C-series switch that connects to the SR2122-2 must be set to FL-Port mode if using MDS v2.01b or later switch firmware.
- For FCIP with C-Series switches, the SR2122-2 must be configured for `useBport` disabled if using MDS v2.01b or later switch FW. Refer to page 62 of the *HP StorageWorks SR2122-2 IP Storage Router Getting Started Guide* for more information.

### ISL loss can result when the SR2122-2 is configured as FCIP and used to extend B-series switches upgraded to firmware 3.2.x or 4.4.x

When the SR2122-2 is used to extend a fabric between two B-series switches, the ISL may segment due to a switch firmware upgrade. The new firmware is now aware of SAN extension gateways such as the SR2122-2 and can now enable ISL R\_RDY mode on a port.

ISL R\_RDY mode sends ELP with Flow Control Mode 02 and enables connectivity with WAN gateway products. If a port is ISL R\_RDY mode-enabled, it can only receive ELP with Flow Control Mode 02; ELP with Flow Control Mode 01 segments the fabric.

This mode cannot detect the PID format of connected ports. If the PID formats for two ISL R\_RDY mode ports are not the same, zoning drops frames.

This feature is persistent across reboots and does not require a license key.

Use the `portCfgShow` command to view whether ISL R\_RDY mode is enabled on a port.

The switch ports now connected to the Fibre Channel ports of the SR2122-2 must have ISL R\_RDY mode enabled. This is accomplished with the following switch CLI command:

```
portcfgislmode [slotnumber/]portnumber, [mode]
```

**slotnumber** - Specify the slot number for a B-Series director. For all other switches, this operand is not required. The slot number must be followed by a slash ( / ) and the port number, so that each port is represented by both slot number (1 through 4 or 7 through 10) and port number (0 through 15).

The B-series Director has a total of 10 slots. Slot numbers 5 and 6 are control processor cards; slots 1 through 4 and 7 through 10 are port cards. On each port card, there are 16 ports, counted from the bottom, numbered 0 to 15.

**portnumber** - Specify a port number. Valid values for port number vary, depending on the switch type. This operand is required.

**mode** - Specify 1 to enable ISL R\_RDY mode. Specify 0 to disable ISL R\_RDY mode. This operand is required.

### RA/MA8000, ESA/EMA12000 LUNs are initially passed to the SR2122-2 with the offset included in the LUN numbering.

When LUNs are first presented to the SR2122-2 from an RA/MA8000, ESA/EMA12000 a “Show Devices” issued on the SR2122-2 may show the LUNs with the offset number included.

For example, if the offset for the SR2122-2 connection is 80 and LUNs 81 and 82 are presented to the SR2122-2 then they may appear on the SR2122-2 as LUN 81 and 82 for the controller.

A reboot of the SR2122-2 will set them correctly to LUN 1 and LUN 2.

## **Ports FC1 and FC2 are set to Loop Preferred by default**

During the initial setup of the SR2122-2, the user is asked to specify whether the Fibre Channel ports are connected to an Fibre Channel hub or Fibre Channel switch. Although switch is the only supported option, the Fibre Channel ports are set to Loop Preferred.

To reset the Fibre Channel ports to the correct setting, Point-to-Point, the user may use the Configuration Tab in the SR2122-2 GUI or the SR2122-2 CLI command:

```
SR2122> Interface FC1 Topology ptp
```

## **iSCSI CRC support**

The iSCSI CRC feature is not supported with Windows 2000, Windows 2003, and Red Hat Linux.

The iSCSI CRC feature is supported for HP-UX.